Epidemiology-2013

OMICS Group Conferences
Accelerating Scientific Discovery

International Conference on
Epidemiology & Evolutionary Genetics

August 21-23, 2013 Holiday Inn, Orlando-FL, USA

Animal mummies: Taphonomic and catacomb-derived

Bruce M Rothschild

Biodiversity Institute, University of Kansas, USA

Abstract

Perhaps most famous is the hadrosaurs mummy at the American Museum of Natural History. Preservation of soft tissues has subsequently been recognized, culminating in the recent discovery of three dimensional dinosaur mummies. Epidemiologic study is probematic, however, with an N of 1. This problem is resolved with examination of sarcophygeal samples, such as that from the Serapeum sarcophagi of North Saqqara Egypt, last utilized just over 2000 years ago.

The post-cranial remains of *Papio* (baboons) were examined for osseous pathology. Minimum number of individuals, calculated on the basis of post-cranial remains was 80, although 146 skulls were present. Abnormal post-cranial findings included sacroiliac joint erosion, marginal and non-marginal syndesmophytes, zygapophyseal and costovertebral joint fusion, appendicular joint erosions with reactive new bone formation and fusion (evidence of spondyloarthropathy) and bowed, shortened (evidence of osteomalacia/rickets), with only isolated examples of trauma (fractures).

While the frequency (calculated as 5 of 80 or 6.25%) was indistinguishable (Chi square = 0.85) from the 3.8% noted in baboons in the 1920's, the documented geometric increase in frequency of spondyloarthropathy in baboons (over recent and geologic time) suggests this should have been significantly less. This suggests the possibility that the animals were raised in sanitarily-challenged conditions.

Post-cranial evidence of osteomalacia/rickets, in the form of bowed, shortened long bones, was found in 12.9%, indistinguishable (Chi square=0.72) in frequency from that reported by Nerlich et al (1993). This, and absence of scurvy-relatable hematomas, contrasts with the 80% frequency of inflated facial bones with calvarial porosity. The perspective cannot be supported that facial and calvarial alterations are attributable to either scurvy or osteomalacia, but raise the question of a thalassemia-like or other exaggerated hematopoiesis-related disorder.

Biography

Bruce M. Rothschild graduated from New Jersey College of Medicine in 1973. He is a Fellow of the American College of Physicians, American College of Rheumatology and Society of Skeletal Radiology and elected to the International Skeletal Society. He has been recognized for his work in rheumatology and skeletal pathology where his special interests focus on clinical-anatomic-radiologic correlation, data-based paleopathology, evolution of inflammatory arthritis and tuberculosis and management of inflammatory arthritis. He is widely recognized for his contributions to understanding radiologic manifestations of rheumatologic disease. He has been a Visiting Professor at universities in the US, Canada, the Carribean, South America, Europe, the Middle East, South Africa, Asia and Australia and has been an invited lecturer at universities, hospital and museums throughout the world.

bmr@ku.edu